

REMARKS

Applicant notes the filing of an Information Disclosure Statement herein on November 11, 1999 and note that no copy of the PTO-1449 was returned with the outstanding Office Action. Applicant respectfully requests that the information cited on the PTO-1449 be made of record herein.

The Office Action mailed October 17, 2001, has been received and reviewed. Claims 1 through 29 are currently pending in the application. Claims 1 through 29 stand rejected. Applicant has amended claims 1, 16, 17, and 27-29, and respectfully requests reconsideration of the application as amended herein.

35 U.S.C. § 251

Claims 1 through 29 stand rejected under 35 U.S.C. § 251 as being an improper recapture of broadened claimed subject matter surrendered in the application for the patent upon which the present reissue is based. Specifically, the Examiner stated that applicant is attempting to recapture claimed subject matter that relates to the openings in the bond pads extending through the bond pads rather than just to the bond pads. In their current form, independent claims 1, 8, 16, 17, 27, and 28 recite that the openings extend into the bond pads or bond pad surfaces, as opposed to extending through the same. In view of the amendments to the claims, applicants respectfully request withdrawal of the rejections under 35 U.S.C. § 251.

35 U.S.C. § 102(b) Anticipation Rejections

Anticipation Rejection Based on Japanese Patent No. 63-161634 to Kishi

Claims 1, 2, 7, 8, 13, 15 through 18, 23 through 27 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Kishi (Japanese Patent No. 63-161634). Applicant respectfully traverses this rejection, as hereinafter set forth.

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Brothers v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The identical invention

must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

The examiner relies on Kishi for disclosure of an “integrated circuit device which includes through-holes in the bonding pad.” (Office Action at pg. 3). As illustrated in Figures 1a and 1b of Kishi, an aluminum pad electrode 4 has slitty through-holes 7 that are adapted to absorb bonding stress. The through-holes 7, as the name indicates and as the figures illustrate, extend through the bond pad. As previously discussed, in their current form, independent claims 1, 8, 16, 17, 27, and 28 recite that the openings extend into the bond pads or bond pad surfaces, as opposed to extending through the same. As such, Kishi does not describe each and every element of the pending claims. In view of the foregoing, Kishi does not anticipate claims 1, 2, 7, 8, 13, 15 through 18, 23 through 27, and withdrawal of the rejection to the same based on 35 U.S.C. § 102(b) is respectfully requested.

Drawings

Applicant submits herewith, under cover of a separate Letter to the Official Draftsperson, proposed corrections to FIG. 1 of the drawings. Specifically, Figure 1 was objected to for failing to identify a sectional designation with arabic or roman numbers. All proposed corrections have been marked in red. Applicants respectfully request approval of the corrections to the drawings.

Specification

In view of the changes to FIG. 1, applicant has amended the paragraphs which describe FIG. 2 and FIG. 3 under the “BRIEF DESCRIPTION OF THE DRAWINGS” section to reflect the changes made.


ENTRY OF AMENDMENTS

The amendments to claims 1, 16, 17, and 27-29 above should be entered by the Examiner because the amendments are supported by the as-filed specification and drawings and do not add any new matter to the application. Further, the amendments do not raise new issues or require a further search.

CONCLUSION

Claims 1 through 29 are believed to be in condition for allowance, and an early notice thereof is respectfully solicited. Should the Examiner determine that additional issues remain which might be resolved by a telephone conference, he is respectfully invited to contact Applicants' undersigned attorney.

Respectfully Submitted,


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Enclosure: Version With Markings to Show Changes Made

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

1. (Twice Amended) A semiconductor device having an improved bond pad, the semiconductor device comprising:
 - a. a bond pad electrically connected to an active circuit in the semiconductor device;
 - b. a substantially flat bonding surface on the bond pad; and
 - c. an opening extending [through] into the bonding surface.

16. (Twice Amended) A semiconductor device, comprising:
 - a. a layer of insulating material;
 - b. a substantially flat layer of conductive material over lying the layer of insulating material;
 - c. bond pads formed as select areas on a surface of the layer of conductive material; and
 - d. at least one opening extending into [through] the bond pads.

17. (Twice Amended) An improved bond pad comprising:
a metal layer having a substantially planar surface, said metal layer electrically connected to an active circuit of a semiconductor device and having at least one opening extending [therethrough] into said metal layer.

27. (Twice Amended) A semiconductor device having an improved bond pad, the semiconductor device comprising:
a bond pad electrically connected to an active circuit of the semiconductor device, said bond pad having a substantially planar surface; and
at least one opening extending [through] into said bond pad.

28. (Twice Amended) A semiconductor device having an improved bond pad, the bond pad having a metal layer, said metal layer having a substantially planar surface connected to an active circuit of a semiconductor device further having at least one opening extending therethrough, the semiconductor device made according to the method comprising:

forming a thick insulating layer over active circuitry of a semiconductor chip;

etching said thick insulating layer thereby forming clear contact paths to said active circuitry of the semiconductor chip;

forming a metal layer over said thick insulating layer; and

etching said metal layer thereby forming an interconnect wiring pattern and bond pads having at least one opening extending [therethrough] into said bond pads.

29. (Amended) A semiconductor device according to claim [27,] 28 [the method] further comprising:

forming a passivation layer over the metal layer; and

etching said passivation layer to expose select areas of the wiring pattern and bond pads.